

WAR DEPARTMENT TECHNICAL MANUAL

TM 8-618

SUCTION APPARATUS,
PORTABLE, ELECTRIC



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TM 8-618, Suction Apparatus, Portable, Electric, is published for the information and guidance of all concerned.

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BY ORDER OF THE SECRETARY OF WAR:

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SECTION I

GENERAL

1. SCOPE. This manual is published for the information and guidance of all personnel charged with the operation and maintenance of suction apparatus, portable, electric, Medical Department item No. 37750 (fig. 1), in the field.

The suction apparatus, portable, electric, is issued in five models: 110-volt, 25-cycle; 110-volt, 50-cycle; 110-volt, 60-cycle; 110-volt, d-c; and 220-volt, 50-cycle. This manual is concerned chiefly with assembling, operating, maintaining, and packing of two models—the 110-volt, 60-cycle model, which is sent overseas, and the 220-volt, 50-cycle model. A Standard Nomenclature List of parts complete with references to illustrations and quantities of parts per item is given in the appendix.

2. DESCRIPTION. Suction apparatus, portable, electric, is a portable suction apparatus used to suck blood from body cavities and to remove blood and other fluids during surgery.

3. DATA. Pertinent data for equipment follow:

a. Motor. (1) The Gomco apparatus unit operates on 220 volts, 50 cycles, a-c.

(2) The Sorenson and Sklar units operate on 110 to 120 volts, 60 cycles, a-c.

b. Vacuum gauge records inches of vacuum obtained.

c. Vacuum bottles have a capacity of 32 ounces. The bottles are connected in series, so that the overflow from the first suction bottle will automatically flow into the second bottle.

d. Compressor sets up a maximum vacuum of 24 inches.

e. Any good grade of light machine oil may be used to lubricate motor and compressor.

4. MANUFACTURERS. The manufacturers of the suction apparatus, portable, electric, are:

The Gomco Surgical Manufacturing Company, Buffalo, New York.

The C. M. Sorenson Company, New York, New York.

The J. Sklar Manufacturing Company, Long Island City, New York.

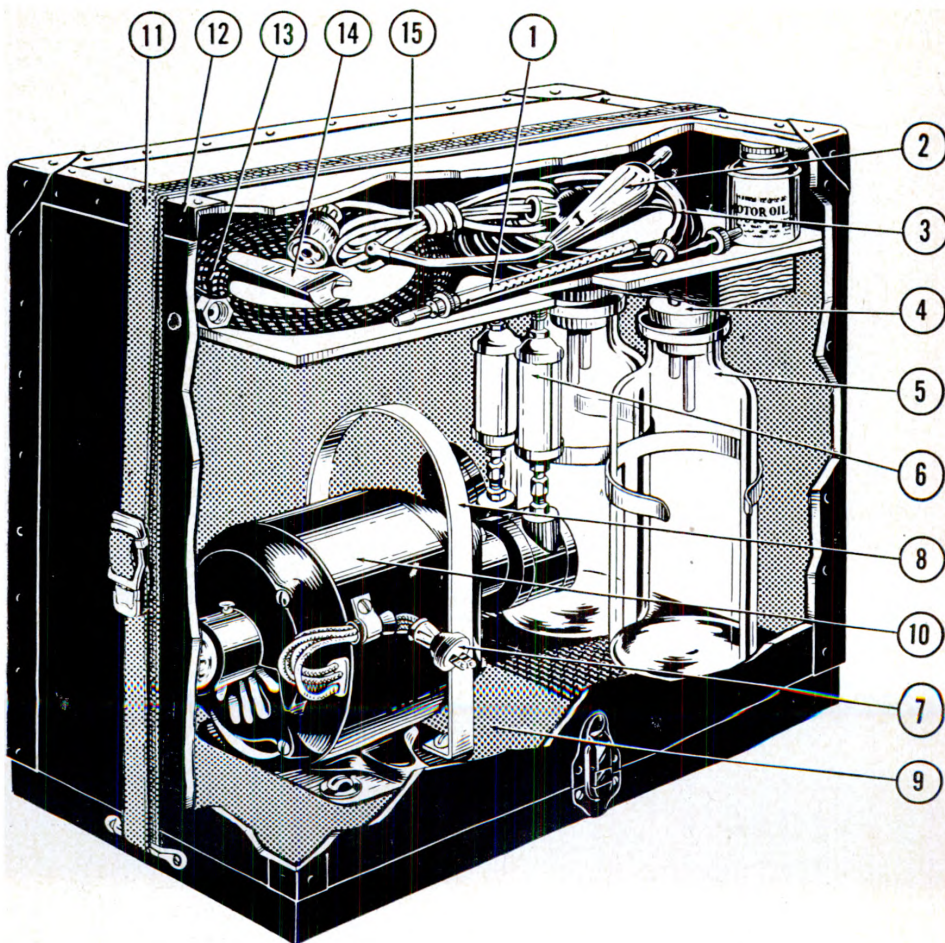


Figure 1. Suction apparatus, Sorenson, cut-away of cover.

Medical
Department
No.

Nomenclature

1. 35477 TUBE, ABDOMINAL, SUCTION: 8 $\frac{3}{4}$ -inch, 23F, Pool.
2. 3R01260 TUBE, YANKAUER:
3. SR00058 TUBING, RUBBER, $\frac{3}{8}$ -INCH, O.D., $\frac{3}{16}$ -INCH I.D. X 24 INCHES:
4. SR00059 STOPPER, RUBBER, 2 HOLE, NO. 9:
5. SR00060 BOTTLE, WIDE MOUTH, FLINT, ROUND, 32 OZ:
6. 3R01004 CHAMBER, FILTER, GLASS:
7. 3R01034 UNION, MALE, DOUBLE:
8. 3R01018 HANDLE, MOTOR:
9. 3R01008 BASE, WOOD, COMPLETE:
10. 3R01020 MOTOR, 110-V., 60-C., COMPLETE:
11. 3R01246 STRAP, WEB:
12. 3R01010 CASE, CARRYING:
13. 3R01032 TUBING, PRESSURE, SILK, COMPLETE:
14. 3R01258 WRENCH, $\frac{1}{4}$ INCH:
15. SR00072 CORD, NEOPRENE, NO. 18, TWO-CONDUCTOR:

SECTION II

PACKING AND ASSEMBLING

5. UNPACKING. To unpack the suction apparatus, portable, electric, proceed as follows:

a. Open the shipping box carefully. Remove paper packing so as to uncover the case. Lift case from the shipping box.

b. The suction apparatus, portable, electric, is issued in its carrying container assembled and ready for operation, except for plugging in the line cord, connecting the suction rubber tubing, silk pressure tubing, and attachments.

c. To unpack, open case and remove the suction apparatus. Then from the compartment inside the case, remove the suction rubber tubing, silk pressure tubing, and accessories necessary for operation (fig. 2).

6. ASSEMBLING. To set up the suction apparatus, portable, electric, for operation, proceed as follows:

a. Attach the silk pressure tubing (fig. 2) to the positive outlet of the pump.

b. Gomco. Attach the rubber tubing to the vacuum bottle (fig. 3).

c. Sorenson. Connect the short rubber tubing on the suction purifier to the male fitting on the suction bottle (fig. 4).

d. Sklar. Connect the rubber tubing to the short angle tube (fig. 5).

Caution: The Sorenson and Sklar units must be assembled so that suction from the pump goes to the short-angle tube to the vacuum bottle, and through the long-angle tube to the patient.

e. Either the Yankauer suction tube or the Poole abdominal suction tube (figs. 1 and 2) may be slipped into the end of the vacuum rubber tubing as the operation may require.

f. Plug the line cord into the electric outlet of current indicated on the number plate on the base. The apparatus is then ready for use.

7. DISASSEMBLING AND PACKING. To disassemble and pack all three models of the suction apparatus—

a. Remove the plug line cord from the electric outlet.

b. Remove and replace in the accessories compartment all tubing and accessories.

c. Put the cover in place, fasten the hasps, and buckle the strap tightly around the case. The suction apparatus is then completely packed and ready for transportation (fig. 1).

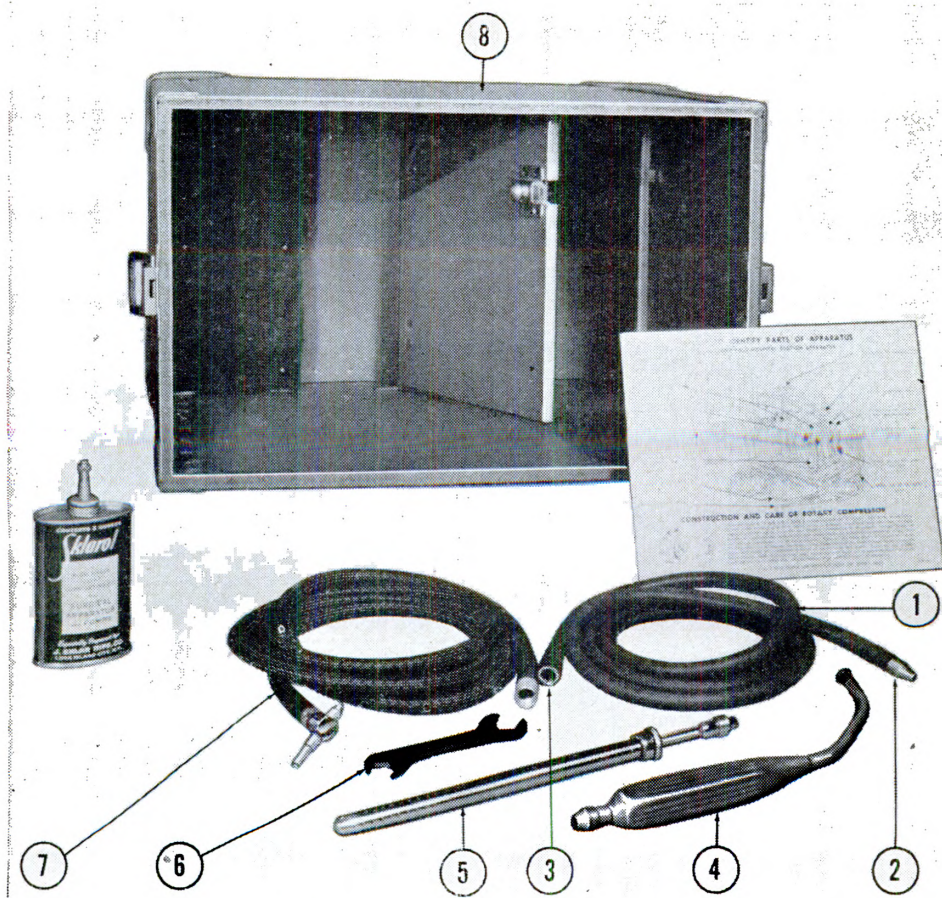


Figure 2. Suction Apparatus, Sklar, carrying case cover with all accessories.

*Medical
Department*
No.

Nomenclature

- | | |
|------------|---------------------------------------------------------------------------------|
| 1. SR00058 | TUBING, RUBBER, $\frac{3}{8}$ INCH, O.D., $\frac{3}{16}$ INCH I.D. X 24 INCHES: |
| 2. 3R01220 | COUPLING, MALE: |
| 3. 3R01218 | COUPLING, FEMALE: |
| 4. 3R01260 | TUBE, YANKAUER: |
| 5. 3547700 | TUBE, ABDOMINAL, SUCTION: 8 $\frac{3}{4}$ -inch, 23F, Pool. |
| 6. 3R01258 | WRENCH, $\frac{1}{4}$ INCH: |
| 7. 3R01254 | TUBING, PRESSURE, SILK, COMPLETE: |
| 8. 3R01216 | CASE, CARRYING: |

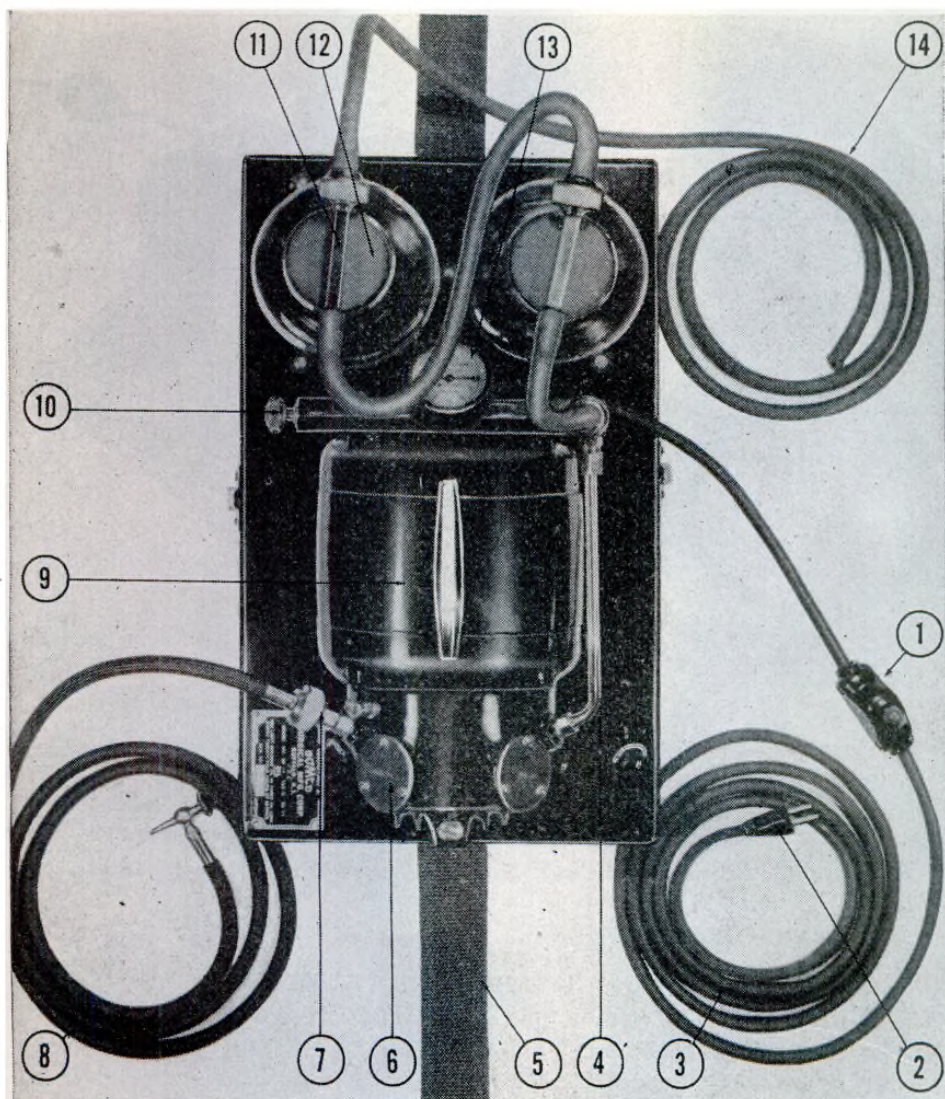


Figure 3. Suction Apparatus, Gomco, cover removed, ready for use.

Medical
Department
No.

Nomenclature

- | | | |
|-----|---------|------------------------------------------------------------------------------------|
| 1. | SR00081 | SWITCH, THRU CORD, SINGLE-POLE: |
| 2. | SR00026 | PLUG, MALE, SMALL, 2-PRONG: |
| 3. | SR00072 | CORD, NEOPRENE, NO. 18, TWO-CONDUCTOR: |
| 4. | 3R00826 | LINE, AIR, METAL: |
| 5. | 3R01246 | STRAP, WEB: |
| 6. | 3R00806 | COVER, FILTER: |
| 7. | 3R00814 | FITTING, FEMALE: |
| 8. | 3R00828 | TUBING, PRESSURE, SILK, COMPLETE: |
| 9. | 3R00818 | HANDLE, MOTOR: |
| 10. | 3R00822 | BAR, CONTROL, COMPLETE: |
| 11. | 3R00810 | FITTING, INLET AND OUTLET: |
| 12. | SR00059 | STOPPER, RUBBER, 2-HOLE, NO. 9: |
| 13. | 3R01228 | GAUGE, VACUUM: |
| 14. | SR00058 | TUBING, RUBBER, $\frac{3}{8}$ -INCH, O. D. $\frac{3}{16}$ -INCH I. D. X 24 INCHES: |

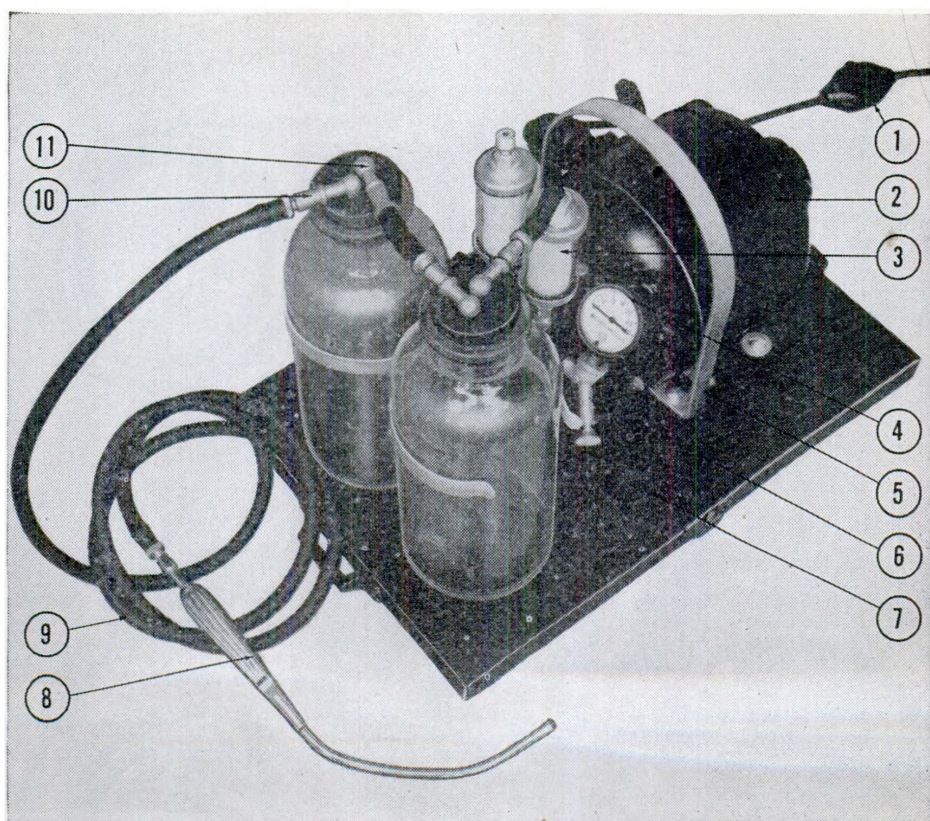


Figure 4. Suction Apparatus, Sorenson, assembled and ready for use.

Medical
Department
No.

Nomenclature

- | | | |
|-----|---------|-------------------------------------------------------------------------------------|
| 1. | SR00081 | SWITCH, THRU CORD, SINGLE-POLE: |
| 2. | 3R01020 | MOTOR, 110-V., 60-C., COMPLETE: |
| 3. | 3R01004 | CHAMBER, FILTER, GLASS: |
| 4. | 3R01228 | GAUGE, VACUUM: |
| 5. | 3R01018 | HANDLE, MOTOR: |
| 6. | 3R01016 | FITTING, ELBOW REGULATING VALVE: |
| 7. | 3R01006 | BASE, FILTER: |
| 8. | 3R01260 | TUBE, YANKAUER: |
| 9. | SR00058 | TUBING, RUBBER, $\frac{3}{8}$ -INCH, O. D., $\frac{3}{16}$ -INCH I. D. X 24 INCHES: |
| 10. | 3R01012 | FITTING, FEMALE, GROUND: |
| 11. | 3R01014 | FITTING, MALE, GROUND: |

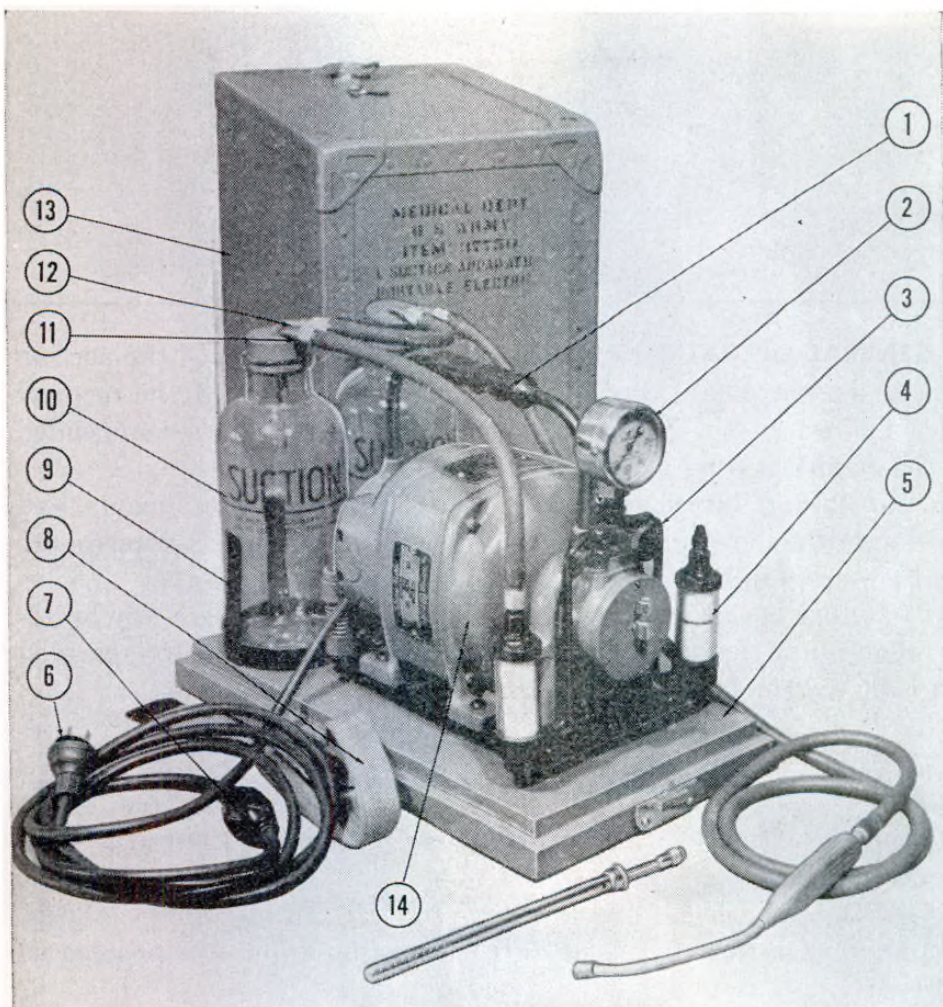


Figure 5. Suction Apparatus, Sklar, assembled with accessories, ready for use.

Medical
Department
No.

Nomenclature

- | | | |
|-----|---------|------------------------------------------|
| 1. | 3R01230 | HANDLE, MOTOR: |
| 2. | 3R01228 | GAUGE, VACUUM: |
| 3. | 3R01222 | COUPLING, FILTER: |
| 4. | 3R01206 | CHAMBER, FILTER, GLASS: |
| 5. | 3R01208 | BASE, WOOD: |
| 6. | SR00026 | PLUG, MALE, SMALL, 2-PRONG: |
| 7. | SR00081 | SWITCH, THRU CORD, SINGLE-POLE: |
| 8. | 3R01246 | STRAP, WEB: |
| 9. | 3R01232 | HOLDER, BOTTLE: |
| 10. | SR00060 | BOTTLE, WIDE MOUTH, FLINT, ROUND, 32-OZ: |
| 11. | 3R01250 | TUBE, ANGLE, SHORT: |
| 12. | 3R01248 | TUBE, ANGLE, LONG: |
| 13. | 3R01216 | CASE, CARRYING: |
| 14. | 3R01234 | MOTOR, 110-V., 60-CYCLE, COMPLETE: |

SECTION III

OPERATION

8. GENERAL OPERATION PROCEDURE. The operation of the suction apparatus, portable, electric, is left to the discretion of the medical officer; however, the following general information is recommended by the manufacturers:

a. Prestarting instructions. (1) Check all hose attachments and make sure they are tight, then make certain that rubber stoppers are firmly inserted in both vacuum bottles.

(2) Before operating the apparatus for the first time in any building, make sure that the electric current is the same as that specified on the instruction plate.

(3) Turn the regulating valve control knob completely in.

(4) Lubricate the compressor as follows:

(a) *Gomco.* Remove the oil well screw and the washer, and fill the oil reservoir with oil. Replace the oil well screw and the washer and screw them down tightly.

(b) *Sorenson and Sklar.* Place several drops of oil into the oil cup.

b. Starting instructions. To start the suction apparatus proceed as follows:

(1) Insert the male plug on the line cord into the female power source socket.

(2) Switch on the line cord switch.

c. General instructions. (1) Only in exceptional cases, such as in sinus drainage and similar uses where high suction is dangerous, will it be necessary to change the position of the regulating valve control knob.

(2) The vacuum gauge will not indicate until a negative pressure is created. This vacuum is accomplished by closing the rubber vacuum tubing leading to the vacuum bottle. When this tubing is fully closed and the regulating valve turned in all the way, the vacuum gauge should register 20 pounds.

(3) The vacuum bottles (SR00060) should not be filled above the caution fill line indicated (figs. 1 and 5).

9. USE OF NEGATIVE PRESSURE (VACUUM). **a. General instructions.** Negative pressure is used for sucking blood from body cavities and for removing blood and other fluids during an operation. Two 32-

ounce vacuum bottles connected by rubber tubing in series are used. These bottles may be used together or individually, each independent of the other. To operate the bottles individually, interchange the rubber tubing connecting them.

b. Use the Poole abdominal suction tube (35477), (figs. 1 and 2) as follows: slip it into the end of the rubber suction tubing. This tube is used for aspirating and remains stationary during use.

c. Use the Yankauer suction tube (3R01260) (figs. 1 and 2) as follows: slip it into the end of the rubber suction tubing. Hold the tubing in the hand while removing blood or other fluids during surgery.

10. USE OF POSITIVE PRESSURE (SPRAYING). Use the silk pressure tubing (figs. 1 and 2) for spraying fluids by attaching the inlet thumb cut-off to a standard spray bottle. Regulate the pressure by placing the thumb or finger over the opening in the thumb cut-off.

SECTION IV

MAINTENANCE

11. TOOLS. **a.** The following tools are recommended for the proper maintenance and repair of the suction apparatus, portable, electric:

(1) Wrench, $\frac{1}{4}$ -inch (3R01258) (figs. 1 and 2), issued with the suction apparatus.

(2) Other tools recommended for use by maintenance personnel only:

(a) Crescent wrench, 6-inch.

(b) Screw driver, medium.

(c) Screw driver, small.

b. All tools should be kept clean and in a designated place when not in use. Any worn or broken tools should be replaced promptly.

12. MAINTENANCE. The following precautions and procedures are necessary for the proper maintenance of the suction apparatus, portable, electric:

a. The base and bottle supports must be kept clean; blood or mucus must be removed promptly after any use of the equipment. Wash thoroughly whenever necessary with soap and warm water.

b. The case must be kept clean inside and outside. Wash whenever necessary with soap and warm water.

c. The silk pressure tubing should be cleaned after use with clear warm water.

d. The rubber tubing which runs from the vacuum bottle to the field of operating must be cleaned thoroughly after use. To clean, remove tubing from fittings and clean thoroughly in warm (not hot) water; dry completely.

e. The Yankauer suction tube (figs. 2 and 4) must be taken apart and cleaned thoroughly after using. To do this, unscrew the tip and clean with green soap and hot water; then sterilize.

f. The Poole abdominal suction tube (figs. 2 and 4) must be taken apart and cleaned thoroughly after using. Unscrew shield and clean with green soap and hot water; then sterilize.

g. The motor must be kept clean and lubricated. Whenever dirty, clean cover with a clean soft rag. Once every 6 months place six drops of oil in oil cup.

h. The compressor must be lubricated regularly. Every 24 hours the oil reservoir must be filled with oil.

i. All air as it passes into and out of the compressor is filtered. These filters must be replaced whenever oil or discoloration appears at the pressure outlet where the silk hose is attached. If no discoloration or oil appears, replace them once every 6 months.

j. Should a vacuum bottle be allowed, through some emergency, to fill past the caution fill line, both bottles are likely to fill and fluid will enter the compressor.

(1) *Cleaning the Gomco compressor.* (a) *Without dismantling after a small quantity of fluid has overflowed into the compressor and compressor has not ceased to operate.* Remove both the filter covers and cause a teaspoonful of kerosene to be sucked into the suction side. After all dirty oil and kerosene has been expelled, permit a small amount of oil to be sucked into the suction side. The old felt filters must be replaced with new ones.

(b) *By dismantling.* First, thoroughly clean the control bar and the air line. Remove the faceplate screws and then take off the faceplate. Withdraw the rotor, by inserting two of the faceplate screws into the two threaded holes in the rotor and then screwing them in for about two or three turns. This will provide a means of pulling out the rotor. Pull out evenly and gently. Clean all parts thoroughly with ether, kerosene, or hot water, then dry completely with a soft dry cloth and reassemble. The rotor must be wiped with oil before placing back on shaft.

(2) *Cleaning the Sorenson and Sklar compressors.* (a) *Without dismantling after a small quantity of fluid has overflowed into compressor and compressor has not ceased to operate.* Remove the two purifiers and then apply oil so that it will be sucked into the suction fitting and expelled from the pressure fitting. Take the purifiers apart and clean them thoroughly; then dry. Replace the old gauze with fresh gauze (consists of approximately 30 inches of 2-inch gauze bandage made into a roll). Replace the rubber washers and make sure the purifiers are tight.

(b) *By dismantling.* Remove the five faceplate screws and the faceplate. Take out the rotor and the fins. Clean the entire housing, inside and out, and all other parts with ether or kerosene; then thoroughly dry. Replace all parts. The fins must be inserted carefully into exactly the same slots from which they were taken. They will not fit closely enough for operation in any but their original slots. Replace the rotor in the same position as it was before removal. Put back the faceplate and screw tightly, but evenly, into plate. Clean all rubber tubing and the bottle-top long- and short-angle tubes. Dry thoroughly, then replace carefully.

APPENDIX

STANDARD NOMENCLATURE LIST OF PARTS

ITEM NO. 37750-14, SUCTION APPARATUS, PORTABLE, ELECTRIC

Gomco Surgical Manufacturing Company

Medical Department No.	Nomenclature	Figure	Quan- tity
	MEDICAL DEPARTMENT ITEM		
3547700	TUBE, ABDOMINAL, SUCTION: 8¾-inch, 23F, Pool.	1, 2	1
	COMMON PARTS		
SR00026	PLUG, MALE, SMALL, 2 PRONG:	3, 5	1
SR00040	SCREW, 6-32 X ¼-INCH, R. H. M.:		6
SR00058	TUBING, RUBBER, ⅜-INCH, O. D. ⅜- INCH I. D. X 24 INCHES:	1, 3, 4	1
SR00059	STOPPER, RUBBER, 2 HOLE, NO. 9:	1, 3	2
SR00060	BOTTLE, WIDE MOUTH, FLINT, ROUND, 32-OZ: Standard, used with stop- per, SR00059.	1, 5	2
SR00072	CORD, NEOPRENE, NO. 18, TWO CON- DUCTOR:	1, 3	1
SR00081	SWITCH, THRU CORD, SINGLE POLE:	3, 4, 5	1
SR00144	SCREW, 10-32 X 1¼ INCH, R.H.M.:		4
SR00231	SCREW, 10-32 X 2¼ INCH, R.H.M.:		2
	UNCOMMON PARTS		
3R00804	CASE, CARRYING:	1, 5	1
3R00806	COVER, FILTER:	3	2
3R00808	FILTER, FELT:		4
3R00810	FITTING, INLET AND OUTLET: For rubber stopper.	3	2
3R00812	FITTING, OUTLET, PRESSURE:		1
3R00814	FITTING, FEMALE: With ground male insert.	3	3
3R00816	GASKET, FILTER:		2
3R00818	HANDLE, MOTOR:	3	1
3R00820	MOTOR, 220-V, 50-C, COMPLETE: With compressor.		1
3R00822	BAR, CONTROL, COMPLETE: With regu- lator valve.	3	1
3R00824	RING, RETAINER, FILTER:		2
3R00826	LINE, AIR, METAL, 6½-INCH, COM- plete: With fittings.	3	1
3R00828	TUBING, PRESSURE, SILK, COMPLETE: With thumb cut-off and fittings.	3	6
3R01228	GAUGE, VACUUM:	3, 4, 5	1
3R01246	STRAP, WEB:	1, 3, 5	1
3R01258	WRENCH, ¼-INCH:	1, 2	1
3R01260	TUBE, YANKAUER:	1, 2, 4	1

ITEM NO. 37750-08, SUCTION APPARATUS, PORTABLE, ELECTRIC

J. Sklar Manufacturing Company

Medical Department No.	Nomenclature	Figure	Quan- tity
	MEDICAL DEPARTMENT ITEM		
3547700	TUBE, ABDOMINAL, SUCTION: 8¾-inch, 23F, Pool.	1, 2	1
	COMMON PARTS		
SR00026	PLUG, MALE, SMALL, 2-PRONG:	3, 5	1
*SR00058	TUBING, RUBBER, ⅜-INCH, O. D., ⅝- INCH I. D. X 24 INCHES:	1, 2, 3, 4	1
**SR00059	STOPPER, RUBBER, 2-HOLE, NO. 9:	1, 3	2
*SR00060	BOTTLE, WIDE MOUTH, FLINT, ROUND, 32-OZ: Standard, used with stop- per, SR00059.	1, 5	2
SR00072	CORD, NEOPRENE, NO. 18, TWO-CON- DUCTOR:	1, 3	1
SR00081	SWITCH, THRU CORD, SINGLE POLE:	3, 4, 5	1
SR00225	SCREW, ¼-20 X ½-INCH, R. H. M.:		2
SR00226	SCREW, ¼-20 X ¾-INCH, R. H. M.:		8
SR00228	SCREW, ¼-20 X 1¼-INCH, R. H. M.:		4
SR00229	WASHER, LOCK, ¼-INCH:		2
SR00230	NUT, ¼ X 20, HEX:		18
	UNCOMMON PARTS		
*3R01202	GASKET, FILTER, LOWER:		2
*3R01204	GASKET, FILTER, UPPER:		2
*3R01206	CHAMBER, FILTER, GLASS:	5	2
3R01208	BASE, WOOD:	5	1
3R01210	BRACE, LARGE:		2
3R01212	BRACE, SMALL:		1
3R01214	CAP, FILTER:		2
3R01216	CASE, CARRYING:	2, 5	1
3R01218	COUPLING, FEMALE: For tubing.	2	7
3R01220	COUPLING, MALE: For tubing.	2	2
3R01222	COUPLING, FILTER: Combination male and female.	5	2
3R01224	FRAME, SUSPENSION, METAL:		2
3R01226	FITTING, COMBINATION: For pressure gauge.		1
3R01228	GAUGE, VACUUM:	3, 4, 5	1
3R01230	HANDLE, MOTOR:	5	1
3R01232	HOLDER, BOTTLE:	5	2
3R01234	MOTOR, 110-V., 60-C., COMPLETE: With compressor.	5	1
3R01236	PAD, FELT: For inside of holders.		2
3R01238	PURIFIER, PRESSURE:		1
3R01240	PURIFIER, SUCTION:		1
3R01242	SPRING, REGULATING VALVE:		1
3R01244	SPRING, SUSPENSION:		4
3R01246	STRAP, WEB: For carrying case.	1, 3, 5	1
3R01248	TUBE, ANGLE, LONG: With female fitting.	5	2
3R01250	TUBE, ANGLE, SHORT: With male fitting.	5	2
3R01252	TUBE: With two fittings for air line.		2
3R01254	TUBING, PRESSURE, SILK, COMPLETE: With thumb cut-off and fittings.	2	6
3R01256	VALVE, REGULATING:		1
3R01258	WRENCH, ¼-INCH:	1, 2	1
3R01260	TUBE, YANKAUER:	1, 2, 4	1

ITEM NO. 37750-08, SUCTION APPARATUS, PORTABLE, ELECTRIC

C. M. Sorenson Company

Medical Department No.	Nomenclature	Figure	Quan- tity
	MEDICAL DEPARTMENT ITEM		
3547700	TUBE, ABDOMINAL, SUCTION: 8 $\frac{3}{4}$ -inch, 23F, Pool.	1, 2	1
	COMMON PARTS		
SR00026	PLUG, MALE, SMALL, 2-PRONG:	3, 5	2
*SR00058	TUBING, RUBBER, $\frac{3}{8}$ -INCH, O. D., $\frac{3}{16}$ -INCH I. D. X 24 INCHES:	1, 2, 3, 4	1
*SR00059	STOPPER, RUBBER, 2-HOLE, NO. 9:	1, 3	2
*SR00060	BOTTLE, WIDE MOUTH, FLINT, ROUND, 32-OZ: Standard, used with stopper, SR00059.	1, 5	2
SR00072	CORD, NEOPRENE, No. 18, TWO- CONDUCTOR:	1, 3	1
SR00081	SWITCH, THRU CORD, SINGLE POLE:	3, 4, 5	1
SR00227	SCREW, $\frac{1}{4}$ -20 X 1 INCH, R. H. M.:		4
	UNCOMMON PARTS		
*3R01002	GASKET, FILTER:		4
*3R01004	CHAMBER, FILTER, GLASS:	1, 4	2
3R01006	BASE, FILTER: With female fitting.	4	2
3R01008	BASE, WOOD, COMPLETE: With bottle holder and rubber pad.	1	1
3R01010	CASE, CARRYING:	1, 5	1
3R01012	FITTING, FEMALE, GROUND:	4	2
3R01014	FITTING, MALE, GROUND:	4	3
3R01016	FITTING, ELBOW, REGULATING VALVE:	4	1
3R01018	HANDLE, MOTOR:	1, 4	1
3R01020	MOTOR, 110-V, 60-C, COMPLETE: With compressor.	1, 4	1
3R01022	PLUG, FEMALE, SMALL, 2-PRONG:		1
3R01024	PURIFIER, PRESSURE, COMPLETE: With cap.		1
3R01026	PURIFIER, SUCTION, COMPLETE: With cap.		1
3R01028	TUBE, ANGLE, LONG: With female fitting.		2
3R01030	TUBE, ANGLE, SHORT: With male fitting.		2
3R01032	TUBING, PRESSURE, SILK, COM- PLETE: With thumb cut-off and fittings.	1	6
3R01034	UNION, MALE, DOUBLE: With hex nut.	1	2
3R01036	VALVE, REGULATING:		1
3R01038	WASHER, FIBER, $\frac{3}{8}$ -INCH: With $\frac{1}{8}$ -inch hole.		1
3R01228	GAUGE, VACUUM:	3, 4, 5	1
3R01246	STRAP, WEB:	1, 3, 5	1
3R01258	WRENCH, $\frac{1}{4}$ -INCH:	1, 2	1
3R01260	TUBE, YANKAUER:	1, 2, 4	1

*To be requisitioned, when required, from the supply depot.

**Spare of these parts are to be maintained with the apparatus, and can be requisitioned from the supply depot.



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